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BLOOMBERG SCHOOL  
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# Inpatient prices in Delaware: Preliminary analysis of MarketScan and Medicare claims data

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# Background

- ▶ Background: Johns Hopkins research is supported by Arnold Foundation project to support and inform state-level efforts to lower private sector prices
- ▶ Analytical method:
  - ▶ Demonstrate the price variation across services (e.g., type of surgery), geographic regions (MSA), and type of patient (plan type)
  - ▶ Compare private sector prices to Medicare prices
  - ▶ Demonstrate extent of practices that increase prices for patients, e.g., out-of-network billing
- ▶ Today:
  - ▶ Average inpatient prices overall and for selected procedures In Delaware
  - ▶ Variation in prices by MSA in Delaware
  - ▶ Comparison of unadjusted commercial and Medicare prices in Delaware

# Data: MarketScan Commercial Claims

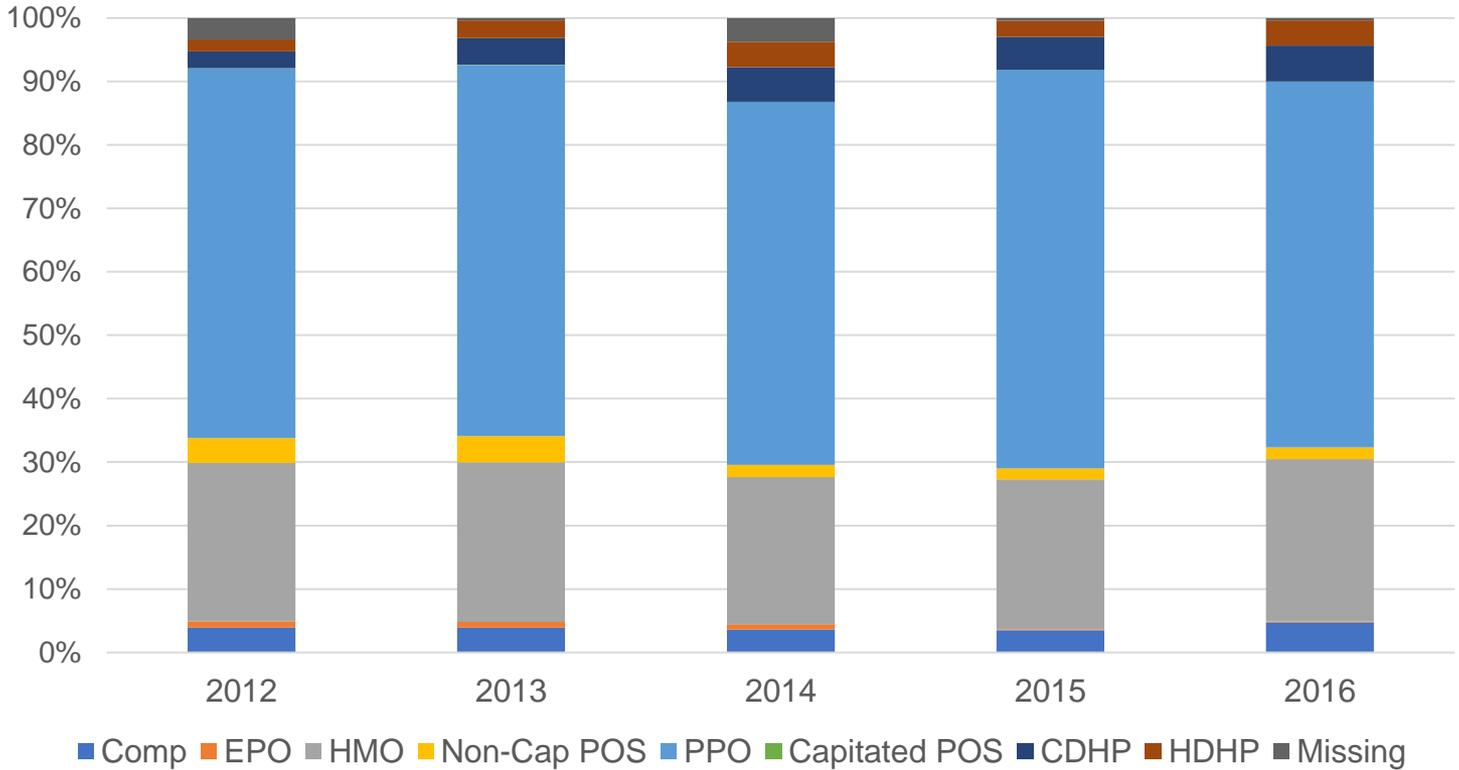
- ▶ Collects private-sector health insurance data from approximately 350 different insurers
- ▶ Captures person-specific clinical utilization, expenditures, and enrollment across settings
- ▶ Includes all active employees, early retirees, COBRA enrollees and dependents insured by contributing employer-sponsored plans
- ▶ Large sample sizes allow for meaningful segmentation
  - ▶ Captures ~36% of 18-64 year old individuals who live in DE and have employer-sponsored plans
  - ▶ High-quality and reliable coding
- ▶ Limitations: convenience sample (not sure who is included and excluded), mostly from large employers, cannot look at specific providers or insurers

# Analysis Sample

- ▶ **MarketScan sample:** 130,000 people age 18-64 who lived in Delaware from 2012-2016
- ▶ **Unit of analysis:** Inpatient admission
- ▶ **Main outcome:** Total spending per admission, Total spending by service
- ▶ **Geography:** State, Metropolitan Statistical Area

Year	Total Mkt Sample	Inpatient Mkt Sample	Medicare 20% Sample
2012	135,020	7,247	-
2013	128,983	6,834	-
2014	136,957	6,845	-
2015	132,887	6,085	-
2016	124,048	6,424	5,913

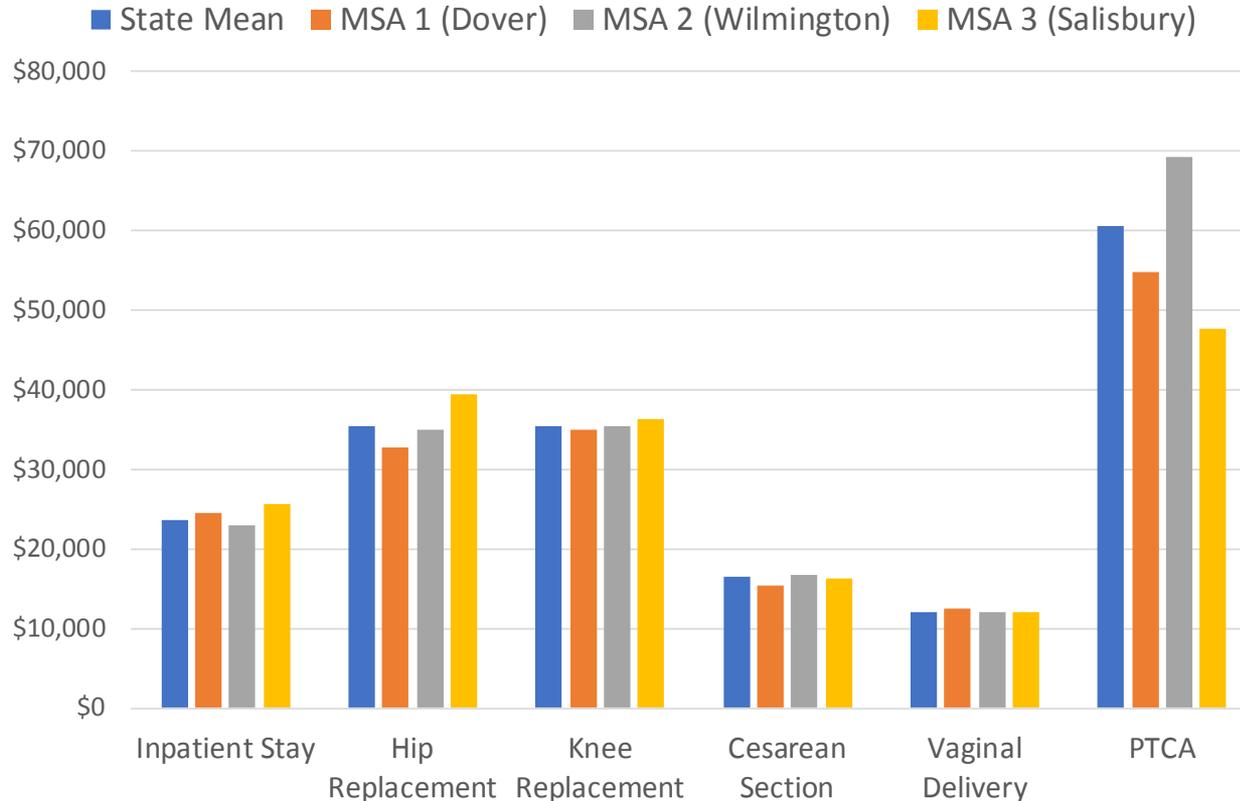
# Type of Insurance Coverage by Year



# Plan Type Details

Plan Type	Plan Type Details
Comp	No limitations on patient use of providers
EPO	Patients must go to in-network providers; gatekeeper; no capitation
HMO	Patients must go to in-network providers; gatekeeper; all/some capitation
Non-Cap POS	Financial incentives to go to in-network providers; gatekeeper; no capitation
PPO	Financial incentives to go to in-network providers; no gatekeeper; no capitation
Cap POS	Financial incentives to go to in-network providers; gatekeeper; capitation
CDHP	PPO + Health Reimbursement Arrangement (+ high deductible typically)
HDHP	Statutory HDHP (as defined by MMA) + HSA

# Private prices are relatively similar for inpatient services across MSAs

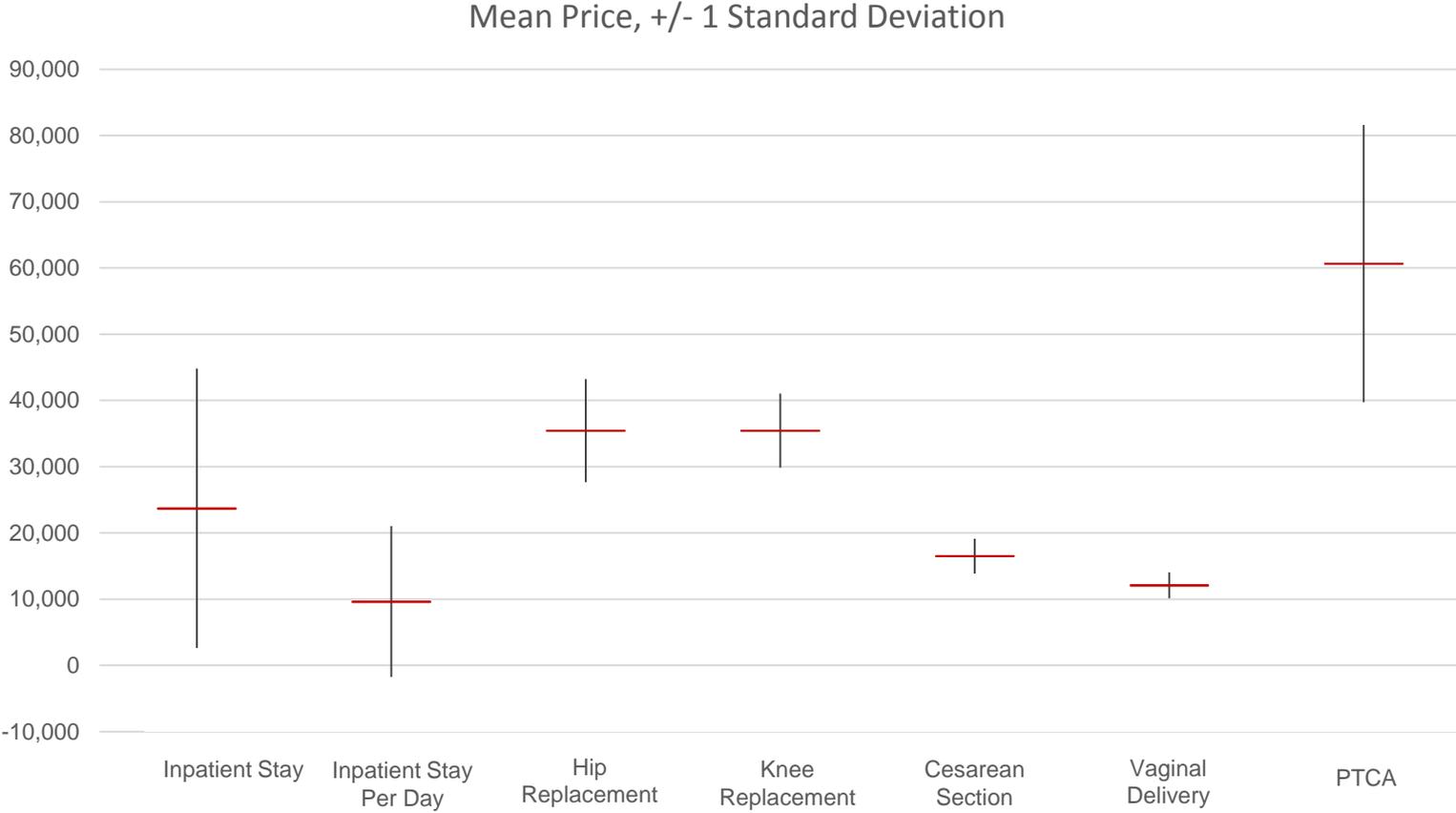


Note: PTCA: Percutaneous transluminal coronary angioplasty

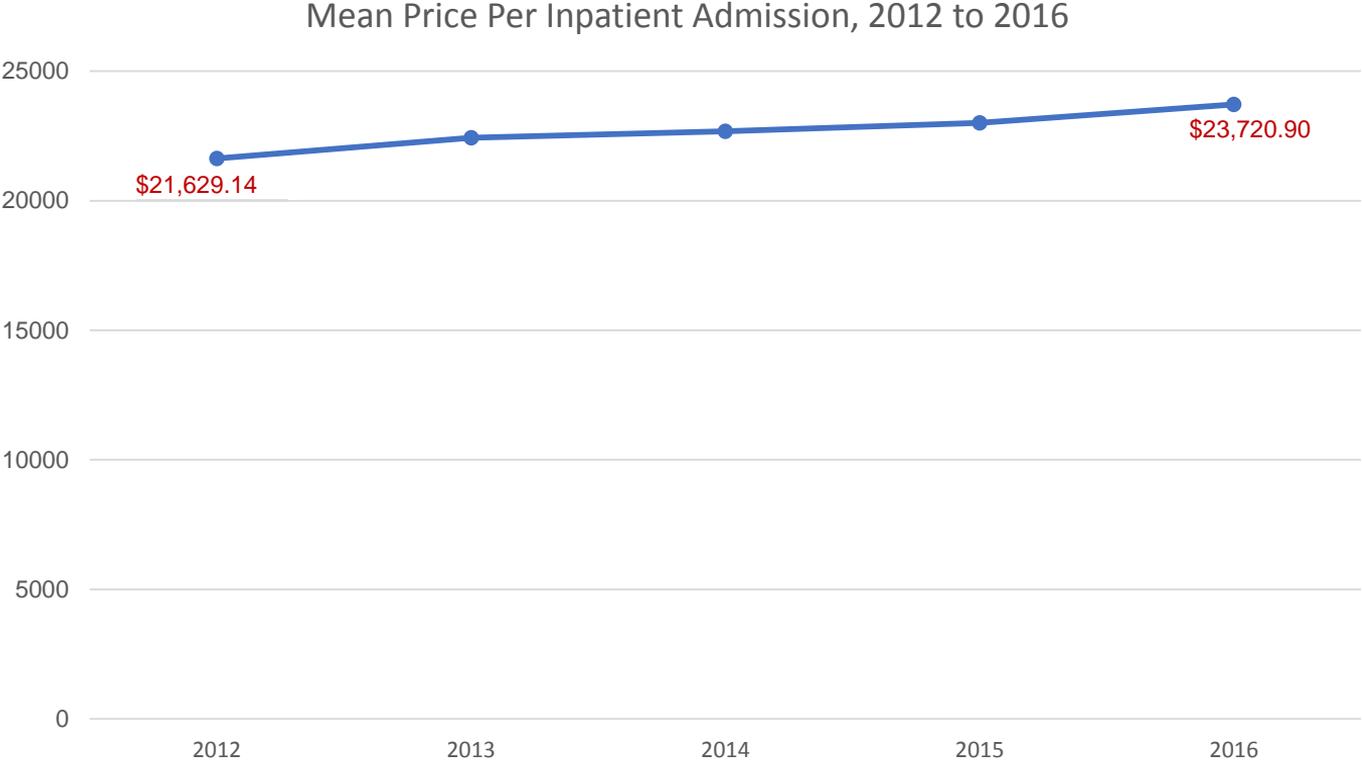
# Private prices for select inpatient services (\$), Delaware 2016

	State Mean	MSA 1 (Dover)	MSA 2 (Wilmington)	MSA 3 (Salisbury)
Inpatient Stay	23,721	24,602	22,892	25,735
Hip Replacement	35,444	32,740	35,011	39,491
Knee Replacement	35,459	34,959	35,374	36,341
Cesarean Section	16,498	15,306	16,756	16,372
Vaginal Delivery	12,098	12,391	12,033	12,081
PTCA	60,653	54,707	69,318	47,661

# Variation in private prices for select inpatient services, Delaware 2016



# Small increase in private price of average inpatient admission in Delaware over time



## Private sector prices are **twice** Medicare prices

	Delaware Commercial Mean. \$	Delaware Medicare Mean, \$	Delaware ratio of commercial: Medicare
Inpatient Stay	23,721	12,282	1.93
Hip Replacement	35,444	13,641	2.60
Knee Replacement	35,459	12,603	2.81
Cesarean Section	16,498	-	-
Vaginal Delivery	12,098	-	-
PTCA	60,653	13,803	4.39

# Variation in private and Medicare prices for select inpatient services, DE 2016



# Delaware Hospitals' Financial Performance

- ▶ We used Medicare cost reports to examine the financial viability of Delaware hospitals
- ▶ How much ability do they have to accept lower rates and still remain profitable?

# Hospital Costs: How Do Hospitals Respond to Lower Prices?

- ▶ We examined what the Medicare Prospective Payment Commission (MedPAC) has said about the ability of hospitals to accept lower prices
- ▶ Hospital costs are **flexible and hospitals respond by lowering their costs**
  - ▶ “Hospitals under financial pressure tend to have lower costs. High pressure equals low cost. Low pressure equals high cost.”
  - ▶ “Costs do vary in response to financial pressure and low margins on Medicare patients can result from a high cost structure that has developed in reaction to high private payers rates.”
  - ▶ “Lack of pressure is more common in markets where a few providers dominate and have negotiating leverage over payers.”

# Hospital Medicare Margins

- ▶ Average Medicare margin in 2016 for efficient hospitals: **-1%**
  - ▶ Effectively Medicare pays the overall cost of efficient hospitals
- ▶ Average Marginal Medicare margin in 2016: **8%**
  - ▶ Hospitals earn a profit on each additional Medicare patient

# Delaware Hospital Market

Region	Hospital	City	Market share
Wilmington, DE HHI: 0.57	Christiana Care Health	Wilmington	73%
	St. Francis Hospital	Wilmington	7%
	Kent General Hospital	Dover	20%
Salisbury, MD HHI: 0.28	Nanticoke Memorial Hospital	Seaford	15%
	Beebe Medical Center	Lewes	26%
	Milford Memorial Hospital	Milford	9%
	3 hospitals in Maryland	Salisbury, Berlin, Crisfield	50%

Centers for Medicare and Medicaid Services (CMS) Medicare cost reports 2016

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/>

Dartmouth Atlas [http://www.dartmouthatlas.org/tools/downloads.aspx?tab=39#zip\\_crosswalks](http://www.dartmouthatlas.org/tools/downloads.aspx?tab=39#zip_crosswalks)

# Delaware Hospital Profitability Is Better Than the US Average

Hospital	City	Beds	Profit (million)	Profit Margin
Christiana Care Health	Wilmington	1,063	\$282	17%
St. Francis Hospital	Wilmington	180	-\$7	-5%
Kent General Hospital	Dover	281	\$73	17%
Nanticoke Memorial Hospital	Seaford	94	\$12	9%
Beebe Medical Center	Lewes	193	\$28	7%
Milford Memorial Hospital	Milford	124	\$14	10%

Centers for Medicare and Medicaid Services (CMS) Medicare cost reports 2016

<https://www.cms.gov/Research-Statistics-Data-and-Systems/Downloadable-Public-Use-Files/Cost-Reports/>

# Policy Considerations for State of Delaware Group Health Program

- ▶ Employers in Delaware including state employee plans are paying double Medicare prices
- ▶ Medicaid pays Medicare prices in Delaware
- ▶ Policy proposal: State employee plans should start using Medicare prices to close gap between state and Medicare prices over time
  - ▶ For example, 200% Medicare in year 1 → 180% → 160% → ... → 100% by year 6
  - ▶ Outcomes: Improve access, reduce state spending
  - ▶ Other states are initiating this type of reference pricing for state employee plans:
    - MT: 234% Medicare
    - CA: Capped payments for certain procedures/services after finding wide variation in prices with no quality difference
  - ▶ Generally accompanied by balance billing regulation and transparency efforts

# Policy Considerations for State of Delaware Group Health Program

- ▶ Regulation of facility fees outside of hospitals for state employee plans
  - ▶ As physician offices are acquired by hospitals, facility fees appear for services provided in these offices. Patients are used to going to the same offices and not being charged this fee. This additional fee is an incentive for consolidation between hospitals and physician offices which raises prices.
  - ▶ Proposal: Prohibit facility fees for off-campus primary care
  - ▶ CT legislation: Notify patients about facility fees being charged, no facility fee for outpatient E&M services, limit fees for uninsured, report facility fee data
- ▶ Push for state to remove regulatory barriers, e.g., Certificate of Need
- ▶ Initiate broader payment reform, e.g., all-payer rate setting, global budgets, all-payer ACO that other private insurers and self-insured companies can use

# Possible next steps – We would like your recommendations!

- ▶ Risk-adjustment
- ▶ Additional procedures (e.g., outpatient, office-based)
- ▶ Analysis of factors that are contributing to the variation in prices, e.g. hospital competition
- ▶ Trends in prices over time
- ▶ Comparison to national prices from MarketScan data
- ▶ Prices by insurance type

# Appendix

# Private prices in DE, 2014

	N	Mean \$	Median \$	SD \$
Inpatient Stay	6,709	21,376.46	14,477.93	20,346.97
Inpatient Stay Per Day	6,709	8,028.18	5,225.45	9,570.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	110	38,735.51	37,143.90	7,277.78
Knee Replacement	235	34,039.38	33,137.92	6,707.77
Cesarean Section	212	15,756.40	15,798.86	2,761.263
Vaginal Delivery	552	10,114.46	9,852.61	2,212.36
PTCA	33	54,574.12	54,245.92	19,054.17

# Private prices in DE, 2016

	N	Mean \$	Median \$	SD \$
Inpatient Stay	6,296	23,720.90	16,162.23	21,102.98
Inpatient Stay Per Day	6,296	9,643.74	5,874.24	11,401.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	127	35,443.88	36,299.92	7,783.65
Knee Replacement	238	35,459.02	36,497.68	5,601.35
Cesarean Section	206	16,498.36	16,132.74	2,635.56
Vaginal Delivery	603	12,097.89	12,383.30	1,945.03
PTCA	60	60,653.43	59,299.09	20,941.55

# Medicare prices in DE, 2016

	N	Mean \$	Median \$	SD \$
Inpatient Stay	9,591	12,281.57	8,478.11	15,179.23
Inpatient Stay Per Day	9,591	3,462.33	2,174.92	4,378.77

	N	Mean \$	Median \$	SD \$
Hip Replacement	217	13,640.86	13,817.55	6,711.93
Knee Replacement	342	12,602.66	12,064.02	5,273.29
Cesarean Section	-	-	-	-
Vaginal Delivery	-	-	-	-
PTCA	82	13,802.51	14,120.86	7,267.41